

Powerful Business

Managing Energy
in the
Northwest Economy

May 1, 2003

**Valley Medical Center
Education Conference Center
Renton, WA**

**Presented by the Electric League
of the Pacific Northwest
and the Northwest Energy Efficiency Council**



Seattle City Light



**PUGET
SOUND
ENERGY**

Powerful Business

Managing Energy in the Northwest Economy

Thursday, May 1, 2003

Valley Medical Center - Conference Center

400 South 43rd Street, Renton

The event's prime sponsors, Puget Sound Energy, Seattle City Light, Tacoma Power and the Electric League of the Pacific Northwest have scheduled a series of presentation panels on topics that help commercial facility managers understand opportunities for saving energy and operating costs in their buildings. Powerful Business is joined this year by the Northwest Energy Efficiency Council and the International Facility Management Association as co-sponsors of this event.



PUGET
SOUND
ENERGY



The theme of this year's conference focuses on how to organize and implement good energy management projects in the tight economic times here in the Pacific Northwest. The conference is targeted to commercial building owners and managers, building operations and engineering staff, architects, consulting engineers, property developers, and other parties interested in cost effective opportunities in commercial energy efficiency. Four parallel conference tracks will highlight presentations on Building Design, including sustainable construction ideas, Operations & Maintenance issues; Engineering, including advances in mechanical system design and the optimization of chiller equipment; and a Programs and Resources track to inform participants of utility and other financial and informational resources available to them. Tabletop exhibits will provide attendees opportunities to talk directly with product and service vendors as well.

7:15 am - 8:00 am - Registration and Continental Breakfast

8:00 am - 8:45 am Welcome - Auditorium

Paul Sommers, Daniel Evans School of
Public Affairs at the University of Washington

Paul Sommers, Daniel Evans School of Public Affairs at the University of Washington, will set the stage for Powerful Business this year. Dr. Sommers opening plenary remarks will focus on the region's economic health and what facility owners and managers as well as the professional design community might expect in the coming months. Is economic recovery underway or even on its way? If large amounts of air have escaped from the region's economic balloon, who can we expect to pump it back up, and how soon before it floats again? Everyone in the region wants to know these answers. Powerful Business attendees will hear from one of the region's most recognized economists, his view on these issues.

Noon - 12:30 pm - Box Lunch

12:30 pm - 1:30 pm Plenary Session - Auditorium

Jeff King, Senior Resource Analyst
for the Northwest Power Planning Council

Jeff King, Senior Resource Analyst for the Northwest Power Planning Council, will re-focus the attention of the conference on the region's electricity future, in a post-lunch plenary session. Mr. King's longstanding resource forecasting work for the Power Council, provides him a unique vantage point for observations on how the once-staid electricity wholesale markets became so topsy-turvy and, most importantly, whether wholesale market volatility looms in our future. Is the region's electricity market calming after the "perfect storm" of 2000-2001? Or are we simply in the eye of the storm with future turbulence ahead? The implications for facility personnel and the professional design community are significant.

Session 1A 9:00 am - 10:15 am

Utility Resources

Moderator: Bob Stolarski, Puget Sound Energy

Speakers: Cal Shirley, *Puget Sound Energy*
Steve Hatcher, *Tacoma Power*
Marya Castellano, *Seattle City Light*

This session will provide conference attendees with the opportunity to learn about the many and varied programs and services currently offered by our local utilities. In particular, the heads of Seattle City Light, Puget Sound Energy and Tacoma Power's conservation programs will be there to provide info and answer questions.

Session 1B 10:30 am - 11:45 am

Metering to Manage Energy Cost

Moderator: Jake Fey, WSU Cooperative Extension

Speakers: Tom Kerfonta, *Puget Sound Energy*
Cody Graves, *Automated Energy, Inc.*
Bob Zak, *Powerit Solutions, LLC*

You can't manage what you can't measure. You need timely, detailed energy use information to gain control of your utility costs. It is time consuming and costly to compile the information needed to effectively manage your energy use, much less make sense out of it. This session will review current energy metering tools for managing energy consumption and shedding energy demand at your facility. Case studies will demonstrate how these tools are helping Puget Sound area companies successfully manage energy costs.

Session 1C 1:45 pm - 3:00 pm

Green Power/Renewables

Moderator: Jack Brautigam, Seattle City Light

Speakers: Jack Brautigam, *Seattle City Light*
Liz Norton, *Puget Sound Energy*
Mark Aalfs, *Tacoma Power*

How are utilities and their customers supporting the development of green power? Why are businesses turning to green power for some of their electricity needs? Local utility representatives will provide an update on green power program activities and describe how businesses can lead the way in the transformation of local and regional markets for new renewable energy resources.

Session 1D 3:15 pm - 4:30 pm

Energy Resources

Moderator: Marya Castellano, Seattle City Light

Speakers: Lee Link, *WSU Cooperative Extension Energy Program*
Diana Grant, *Seattle City Light*
Dave Hewitt, *NW Energy Efficiency Alliance*
Cynthia Putnam, *BOC*

This session will feature information about energy efficiency-related services that are offered around the region by organizations other than the local utilities. Four program managers from around the region will describe their respective initiatives.

Session 2A 9:00 am - 10:15 am

Indoor Air Quality Code Changes and the Effects on HVAC Systems

Moderator: Don Amor, Puget Sound Energy

Speakers: Janice Camp, *Dept. of Environmental Health*
Dennis Heller, *In Control, Inc.*

Concern for IAQ is growing to a point where workplace conditions have a direct effect on our health and productivity, not to mention risks of toxic mold, structural liabilities, and lawsuits. One part of this session will provide a practical perspective on how IAQ affects workplace, productivity and profits; the other part will provide insights on energy-efficient diagnostics, tools, and technologies that will improve workplace conditions. After attending this session you'll definitely breathe easier.

Session 2B 10:30 am - 11:45 am

Premium HVAC Maintenance Program

Moderator: Mary Smith, Puget Sound Energy

Speakers: Kevin Beck, *Puget Sound Energy*
Stan Price, *NEEC*

Energy saving measures have long been an integral part of profit making, and basic operations and maintenance of equipment are critical to that practice. A new premium HVAC maintenance pilot program at PSE has taken that concept a step further to demonstrate significant savings achieved by adding new procedures to routine maintenance calls. Find out what's being done in this field to provide major relief – and profit – for businesses.

Session 2C 1:45 pm - 3:00 pm

Lighting for Facility Improvements

Moderator: Diana Grant, Seattle City Light

Speakers: Greg Hansen, *Balzhiser & Hubbard Engineers*
Michael Lane, *Lighting Design Lab*

Is my current lighting system delivering what I want at the right cost? Attend this session to hear the latest news in commercial lighting system upgrades and operations. From equipment, controls, cost comparisons and energy savings alternatives to general recommendations on applications and operating practices, this session is designed to help facility managers determine their best options in upgrading, operating and maintaining existing lighting systems.

Session 2D 3:15 pm - 4:30 pm

Building Commissioning

Moderator: Syd France, Puget Sound Energy

Speakers: John Heinz, *University Of Washington*
Rich Davis, *Evergreen State College*
Todd McGuire, *EEI*

Is your building delivering the comfort, ease of maintenance and energy performance you expect? Building commissioning ensures that the systems and controls in a building are operating optimally. Attend the session to hear an overview of building commissioning and see case studies of both existing and new facilities. This session is designed to help facility managers understand how building commissioning can help improve occupant comfort and reduce the cost of energy, operations and maintenance.

Session 3A 9:00 am - 10:15 am

Underfloor Air Systems Positives and Negatives

Moderator: Peter Meyer, Tacoma Power

Speakers: Jeff Sloan, *McKinstry Company*
Larry Lusky, *PECI*
Jacke Goertner, *York International*

Underfloor air distribution (UFAD) systems have become more popular for new construction projects. They promise many positive outcomes but before specifying, or designing, here is your opportunity to find out from the experts whether they really deliver energy savings, improved air quality and better occupant comfort. Leading industry experts, who have designed, installed and commissioned major projects will share their experiences with UFAD systems. Take advantage of their practical advice about design considerations such as proper wall sealing, equipment selection and energy savings issues.

Session 3B 10:30 am - 11:45 am

Energy Saving Opportunities in Data Centers

Moderator: John Benny, CFM, Facilities West

Speakers: Doug Bors, *Cone Twelve/Sophometrics, Inc.*
David Poetker, *Coffman Engineers, Inc.*
Leonard Ruff, *Callison Architecture*

Rejecting the heat from network servers and telecommunication equipment creates a design challenge for the architect as well as the electrical and mechanical engineer. As the density of server racks continues to grow, the problem becomes more acute in both retrofit and new construction. While the design issues differ in small retrofit applications from new dedicated server facilities, the objective remains the same - satisfying the customer's need for reliability and affordability (oh, yes, and code compliance too!). This panel features regional leaders in the design of these spaces from architectural and engineering perspectives.

Session 3C 1:45 pm - 3:00 pm

Chiller Optimization

Moderator: Gary Johnson, Tacoma Power

Speakers: Rand Conger, *Johnson Barrow Inc.*
Tom Hartman, *The Hartman Company*

This session will address the latest equipment technologies and plant operational advances in chilled water systems for improved control and energy efficiency. Rand Conger, P.E. of Johnson-Barrow Inc. will discuss the latest advances in chiller design, including variable speed compressors and chiller control systems. Tom Hartman, P.E. of The Hartman Company will discuss energy efficient variable speed chiller and pumping operating strategies. New ultra-efficient all-variable speed chiller plants that incorporate variable speed and flow throughout the entire plant and chilled water system will be discussed.

Session 3D 3:15 pm - 4:30 pm

Controls & Building Automation

Moderator: Ken Kurtz, Tacoma Power

Speakers: Micheal Reed, *Siemens*
Wayne Morrow, *Starfield Controls*

Controls are an essential component of modern buildings. They are the brains that direct the proper function of HVAC and lighting equipment. Controls have advanced significantly since the digital revolution. What are their latest capabilities? Can they integrate different building systems? Can they seamlessly control facilities in multiple locations? What are the pros and cons of integration? How can we make maximum use of the new capabilities? These questions and other cutting edge control issues will be explored in this dynamic session.

Session 4A 9:00 am - 10:15 am

Choosing New Technologies

Moderator: Jean Shaffer, Seattle City Light

Speakers: Robert Cowan,
Fred Hutchinson Cancer Research Center
Roy Hughes P. Eng., *BC Hydro*
Shaun Darragh, *Lighting Design Lab*
James Walker,
Fred Hutchinson Cancer Research Center

How can you reduce the risks inherent in trying new technologies in existing facilities? Why, by leveraging the experiences of others who have gone before. Come to the Choosing New Technologies session to hear about lighting fixtures with built-in sensor and user controls, and innovative variable volume/variable pressure HVAC designs.

Session 4B 10:30 am - 11:45 am

LEED™ and New Building Design

Moderator: Peter Dobrovolny, Seattle City Light

Speakers: Hamilton Hazelhurst, *Vulvan, Inc.*
Bert Gregory, *Mithun*
Paul Anseeuw, *KEEN Engineering*

LEED™ is rapidly changing both the way buildings are designed and valued and the way development firms – developer/owners, architects and their consultants – conduct their business. With a representative from each of these market segments, this session will describe how LEED™ has changed their business, what problems and opportunities they have encountered, and then explore where this new emphasis on sustainable design may take us, and what the implications on building energy use might be.

Session 4C 1:45 pm - 3:00 pm

Design Lessons Learned

Moderator: Dan Thomas, Puget Sound Energy

Speakers: Tom Ferlan, *Notkin Engineering, Inc.*
Dick Geoghegan P.E., *Notkin Engineering,*
Jeff Sloan, *McKinstry Co.*
Oyvind Naess, *Holaday-Parks, Inc.*

Interested in creative solutions to tough mechanical design challenges? These design professionals tell how new technologies and design ideas helped handle the varying needs of a large concert hall, a building renovated for both office and lab space, and a regional distribution center. CO2 sensors, heat and cooling recovery, electrically commutated motors, and natural ventilation were just a few of the strategies used. Come hear what was learned and pick up some creative ideas you can use in your own work.

Session 4D 3:15 pm - 4:30 pm

Compliance and Enforcement: Codes in Washington

Moderator: Stan Price, NEEC

Speakers: Tim Nogler, *Washington State Building Code Council*

Scott Rushing, *McKinstry Company*

Building and energy codes in Washington and renovations. The building code in Washington has been the subject of much debate in this state, with competing model code organizations vying for legislative supremacy. The Washington State Energy Code has not been entangled in this debate, but as a home-grown code in the state it must be updated and improved by the professional design and enforcement communities. What is the status of the WSEC and are there tools in development that will help the professional design community with compliance. This session covers the waterfront in building and energy codes in Washington.

Conference Fees

Conference Registration is \$99. All registrations must be received by April 28th. Registration includes continental breakfast, breaks, and lunch. No on-site registration. Refunds gladly given up to three days in advance.

Utility Resources Booths

Area electric utilities want to share information on programs and services designed to aid in the design, construction and management of commercial properties. Beginning at 10:00 am Puget Sound Energy, Seattle City Light and Tacoma Power will each have representatives available in the entrance area. These information booths will be staffed all day, including during seminars, breaks, and lunch.

Professional Development Certificate

Professional Development Certificates will be available that may be applied to Continuing Education credits. This conference qualifies for Building Operator Certification Continuing Education Credits. CFM Maintenance points form IFMA are available. Contact the Electric League at **425.646.4727** or **1.866.283.7781** for more information.

Networking List

As a benefit to attendees, a resource list will be distributed listing major contacts at each of the sponsoring utilities, plus contact information for the speakers who are presenting. In an effort to aid you in keeping in contact with your colleagues, we will include a list of attendees. If you would like us to omit your name from the list, please indicate this on the registration form.

Oversight Committee

Seattle City Light

Marya Castellano
Jean Shaffer
Andrew Gibb
Javad Maadani

Puget Sound Energy

Dom Amor
Syd France
Bill Steigner

Tacoma Power

Dalene Moore
Peter Meyer
Ken Kurtz
Lelian Solip

NEEC

Stan Price
Cynthia Putnam

Electric League

Kent P. Campbell
Karen McKiernan

Powerful Business: Managing Energy in the Northwest Economy

Thursday, May 1, 2003 - Valley Medical Center Education Conference Center
400 South 43rd Street, Renton, Washington

\$99

Name:	Title:		
Company:	Request for Professional Certificate	yes	circle one no
Address:	City:	St:	Zip:
Phone: ()	Fax: ()	Email:	

Specialty (please circle only one):

Architect	Electrical/Mechanical Engineer	School Maintenance Personnel
Commercial Property Developer	Electric Utility Personnel	Electrical Equipment Supplier
Property Owner or Manager	Energy Services Company	Commercial Contractor
Energy Manager	Building Maintenance Staff	Other _____

Seminars I plan to attend:

1A Utility Resources	2A Indoor Air Quality Code Changes	3A Underfloor Air Systems Positives/Negatives	4A Choosing New Technologies
1B Metering to Manage Energy Cost	2B Premium HVAC Maintenance Program	3B Energy Saving Opportunities in Data Centers	4B LEED™ and New Building Design
1C Green Power/Renewables	2C Lighting for Facility Improvements.	3C Chiller Optimization	4C Design Lessons Learned
1D Energy Resources	2D Building Commissioning	3D Controls & Building Automation	4D Compliance and Enforcement Codes in WA

Amount Enclosed: \$ _____ Registration Deadline: All Registrations must be received by Monday, April 28, 2003

We accept:



or you can register by using



Card # _____

Expire Date _____

Make checks payable to:

Electric League, 1500 114th Ave. SE, Suite 105 Bellevue WA 98005
Phone: **425.646.4727** Fax: 425.646.4729 Email: info@electricleague.net
Toll Free: **1.866.283.7781**

Valley Medical Center's

Education Conference Center, 1st Floor

Thursday, May 1, 2003

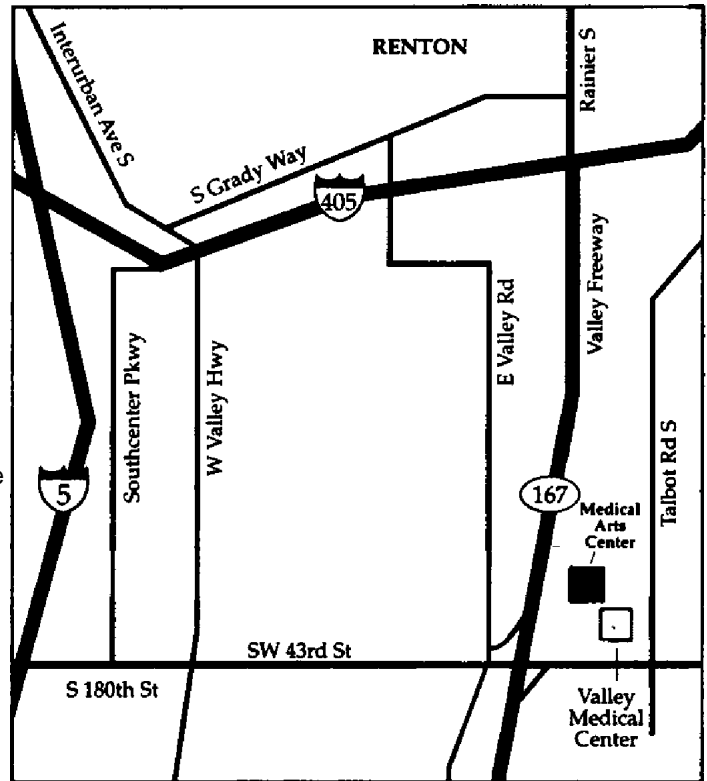
400 South 43rd Street, Renton

From north of Renton take I-5 South to I-405 north

From south of Renton take I-5 North to I-405 north

Then:

Take Highway 167 south to the first exit (south 41st/180th Street), turn left at the end of the off-ramp. Go to south 43rd street, turn left. Take 43rd to Talbot Road, turn left (hospital is on the corner to your left). Take the third hospital entrance on the left to the second parking garage on your right hand side. Park on the third floor where the skybridge connects to the building. Take the elevator down to the first floor and turn right to the lobby for check-in.



1500 114th Ave. SE Suite 105
Bellevue, WA 98004